

What is claimed is:

1. An antimicrobial composition comprising a substance P peptide.
2. The antimicrobial composition of claim 1, wherein the amino acid sequence of the peptide comprises residues 1-8 of SEQ ID No: 1.
- 5 3. The antimicrobial composition of claim 2, wherein the amino acid sequence of the peptide comprises residues 1-8 of SEQ ID No: 2.
4. The antimicrobial composition of claim 2, wherein the sequence is at least 50% identical to the amino acid sequence of SEQ ID Nos: 1 or 2.
- 10 5. The antimicrobial composition of claim 1, wherein the peptide comprises the amino acid sequence Xaa₁-Pro-Xaa₂-Pro-Xaa₃-Xaa₄-Xaa₅-Xaa₆ (SEQ ID NO:12), wherein Xaa₁ and Xaa₂ are positively charged amino acids, Xaa₃ and Xaa₄ are any amino acids other than Pro, and Xaa₅ and Xaa₆ are hydrophobic amino acids.
6. The antimicrobial composition of claim 5, wherein Xaa₅ and Xaa₆ are aromatic amino acids.
- 15 7. The antimicrobial composition of claim 1, wherein the amino acid sequence of the peptide comprises amino acids 1-10 of SEQ ID Nos: 1 or 2.
- ✓ 8. The antimicrobial composition of claim 1, wherein the amino acid sequence of the peptide comprises Arg-Pro-Lys-Pro-Gln-Gln-Phe-Phe-Gly-Leu-Xaa (SEQ ID NO:13), wherein Xaa is not a methionine residue.
- 20 9. The antimicrobial composition of claim 6, wherein Xaa₅ and Xaa₆ are selected from the group consisting of Phe and Trp.
10. The antimicrobial composition of claim 1, having at least one dextrorotatory amino acid.

11. The antimicrobial composition of claim 1, wherein the peptide inhibits growth of a bacterium, fungus, or virus.

12. The antimicrobial composition of claim 11, wherein the peptide inhibits growth of a cell selected from the genera consisting of *Staphylococcus*, *Streptococcus*,
5 *Bacillus*, *Clostridium*, *Escherichia*, *Shigella*, *Campylobacter*, *Hemophilus*, *Proteus*,
Yersinia, *Klebsiella*, *Pseudomonas*, and *Serratia*.

13. The antimicrobial composition of claim 11, wherein the peptide inhibits growth of a cell selected from the genera consisting of *Aspergillus*, *Candida*, *Cryptococcus*,
Epidermophyton, *Histoplasma*, *Microsporum*, and *Trichophyton*.

10 14. The antimicrobial composition of claim 1, further comprising a second antimicrobial agent.

15 15. A method for inhibiting growth or survival of a microorganism, comprising directly contacting the microorganism with a substance P peptide or a peptide mimetic thereof.

16 16. The method of claim 15, wherein the peptide comprises amino acids 1-8 of SEQ ID Nos: 1 or 2.

17. The method of claim 16, wherein the peptide comprises amino acids 1-10 of SEQ ID Nos: 1 or 2.

18. The method of claim 15, wherein the microorganism is a bacteria or a
20 fungus.

19. The method of claim 18, wherein the bacteria is selected from the group of cutaneous, mucosal, or enteric bacteria.

20. A method of inhibiting a microbial infection, comprising identifying a mammal suffering from or at risk of developing the infection and administering to the
25 mammal a substance P peptide or peptide mimetic thereof.

21. The method of claim 20, wherein the peptide or peptide mimetic is administered topically.

22. A method of inhibiting a microbial infection, comprising introducing into an articulating joint of an animal a substance P peptide or peptide mimetic thereof.

5 23. A method of inhibiting a microbial infection, comprising introducing directly into an abscess a substance P peptide or peptide mimetic thereof.

24. A kit comprising at least one unit dose of an antimicrobial substance P peptide having at least 50% identity to positions 1-8 of SEQ ID Nos: 1 or 2.

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